**K-5 Math Lesson Plan**

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| **Teacher:**  **Buckley, Hash** | | | **Grade: 5** | | | **Date(s)**: Sept. 2012  Unit 2 Task 2 Day 4 |
| **Unit Title:**  Unit 2 - Operations with Whole Numbers and Decimals | | | | **Corresponding Unit Task: Unit 2 Task 2** | | |
| **Essential Question(s): How can you use division to solve real world problems?** | | | | | | |
| **Materials/Resources** | | | | | **Essential Vocabulary** | |
| **Teacher:** | | **Student:**  **Food collection sheet from Task 1**  Collection sheet for Task 2 | | | division/divide  quotients  dividends  rectangular arrays  area models  equations | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  √ 1. Make sense of problems and persevere in solving them.  √ 2. Reason abstractly and quantitatively.  √ 3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  √ 6. Attend to precision.  √ 7. Look for and make use of structure.  √ 8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:** 5.NBT.6  *Find whole-number quotients of whole numbers with up to four-digit*  *dividends and two-digit divisors, using strategies based on*  *place value, the properties of operations, and/or the relationship*  *between multiplication and division. Illustrate and explain the*  *calculation by using equations, rectangular arrays, and/or area*  *models.* | | | | | |
| **I Can Statement(s):**   * I can determine whole number quotients with up to four-digit dividends and one-digit divisors. * I can determine whole number quotients with up to four-digit dividends and two-digit divisors. * I can use the properties of operations as a strategy when finding a quotient. * I can use the relationship between multiplication and division when finding a quotient. | | | | | |
| **Activating Strategy/Hook:** Students will review final spreadsheet product from Task 1 Final Day. | | | | | |
| **Teacher Directed:** Teacher will give the directions for completing the task as outlined in the Independent practice portion of the lesson plan. | | | | | |
| **Guided Practice:** Teacher will model the steps for how to complete the food distribution spreadsheet using the “Cans of Golden Corn” number from the 5th grade portion of the spreadsheet. After students have seen how to complete the spreadsheet they will move onto Independent Practice. | | | | | |
| **Independent Practice: :** The teacher will now guide the students to take the total amount of food for each item and divide them among 25 agencies that the food will be given to. The teacher can share the list of agencies that are on the Second Harvest website <http://www.hungernwnc.org/our-partners/index.html>. They will use the spreadsheet with the information from Task One. Students should also decide what they are going to do with the leftover food.  \*Alternative: The teacher may select the number of agencies that the students will be dividing by to modify assignment as long as the divisor is two-digit.   * The students will get into groups of 2-4. When working in teams, each student can have a role: examples are: group manager, recorder, checker, and reporter. The group manager can assign different items to be calculated to each member (by item or grade level), the recorder can record the answers on the spreadsheet; the calculation supervisors (two students or all) can double check the work of others before recording. * As they finish, the students can exchange their form with another group and check each other’s work using a calculator. Remember to use the integer division key in order to have remainders. They will then approve the calculations as they check the spreadsheets. * The students will now look at the column of leftover food. The group should decide what they should do with the leftover food. They should be prepared to share and support their suggestion with the group.   The teacher will lead the discussion with all the groups and reach a consensus about what to do with the leftover food. Suggestions: add one more organization to the list and distribute to them, share as much of the food as they can with the 25 (or other number of) organizations, but know that one box/container will not have the same amount of food, etc | | | | | |
| **Closing/Summarizing Strategy:**  The teacher will lead the discussion with all the groups and reach a consensus about what to do with the leftover food. Suggestions: add one more organization to the list and distribute to them, share as much of the food as they can with the 25 (or other number of) organizations, but know that one box/container will not have the same amount of food, etc  Students will write a paragraph about what they would do the remaining food as well as why they would make those choices. Students will present their thoughts in front of the class. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| * Students can use short-division method to solve problems accurately. * What If….   We wanted to combine another state such as South Carolina to our efforts? | | | * Teacher may limit the amount of items a student needs to complete to demonstrate proficiency. * Teacher can have the group divide by 10, 12, or other two-digit divisor. * Student may use calculator after each calculation to check for accuracy. * Teacher may designate only one grade level instead of all three grade levels for calculations. * Use an organizer to show steps for division as they work through the problems.   Work with a partner and talk through the process as they solve it. | | | * Use an organizer to show steps for division as they work through the problems. * Use an easier division problem to guide through the steps of solving the computation before moving on to larger dividends. * Highlight words from the task that are new or necessary vocabulary words and create non-linguistic representations of the words. * Build background for how food is distributed. |
| **Assessment(s):**  Teacher will assess using the Food distribution spreadsheet. | | | | | | |
| **Teacher Reflection:** (Next steps?)   * What elements of the lesson worked, which elements did not * Which students have achieved mastery * Does any material need to be retaught | | | | | | |